Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_/\_\_\_/\_\_\_

1. Janice has final exams in Algebra 1 and Biology on Friday. She has up to 12 hours to study for the exams and her mom said she must spend more time on Algebra (*a*) than Biology (*b*). Which of the following constraints can be used to represent this situation?

	1. 
	2. 
	3. 
	4. 
2. Alyssa emptied out her change jar to buy a new binder for school. She found 147 coins consisting of dimes and nickels that totaled $11.65. Write a system of equations that could be used to determine how many dimes, *d,* and how many nickels, *n*, Alyssa had in her change jar.



1. A company is repaving their parking lot and trying to decide how many parking spaces they can make when painting the new lines. The lot has 3200 square feet of room for the parking spaces. A standard car’s parking space is 162 square feet and a compact car’s parking space is 120 square feet. Select all of the following that are viable solutions to this parking lot situation.

	1. 13 standard cars and 10 compact cars
	2. 10 standard cars and 13 compact cars
	3. 18 standard cars and 6 compact cars
	4. 6 standard cars and 18 compact cars
	5. 19 standard cars and 26 compact cars

1. Annalise realized she needed two part-time jobs after school to raise enough money to buy a car within a month after getting her driver’s license. She works the same number of hours at each job in one week and receives $10 per hour to babysit and $8 per hour to bag groceries. She also spends $11 per week on lunch at school. Which of the following equations represents the amount of money Annalise earns (*y*) in a week based on the number of hours (*x*) she works?
	1. 
	2. 
	3. 
	4. 
2. Johnnie likes to buy slices of pizza in the cafeteria for lunch for $1.75. Amy prefers to buy hamburgers for lunch, which cost $2.50 each. Between the two of them, Johnnie and Amy have $15.50. How many hamburgers and slices of pizza can they buy? Sort the following solutions into their appropriate category.

**Solutions**

3 slices and 2 hamburgers

6 slices and 2 hamburgers

4 slices and 4 hamburgers

2 slices and 6 hamburgers

5 slices and 1 hamburger

1 slice and 5 hamburgers

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| **Categories** |
| **Viable Solution** | **Non-Viable Solution** |
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